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Tesla vs gauss, and other obscure units (2 msgs)

Date: Tue, 31 Oct 89 21:41:58 est

From: "M.H. SHEREBRIN" <37147_1234@uwovax.uwo.ca>

Subject: ALUMINIUM TOWERS-CRACKS

Date: Monday, 30 October 31, 1989

From: Sherebrin@UWOVAX.UWO.CA

Subject: Fatigue failure in aluminium towers

I have just discovered cracks in my 40 foot aluminium tower. In one location the tubing at a cross strut weld opened and a crack has propagated down the tube (1.25 inch outside diameter) about 12 inches. The second failure is also at a weld. It appears to be a clear torsion failure.

The tower was made by Heights Manufacturing in Almont Michigan and installed by me 18 years ago. Has anyone had similar experiences? Is it safe to leave the tower up after having the cracks welded by a professional? I am worried that the aluminium may have become fatigued and repairing these spots may only result in failures in other locations. Any comments would be greatly appreciated. 73 and thanks,

Marv Sherebrin, VE3FHX

Associate Professor

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London, Ontario, Canada, N6A 5C1

SHEREBRIN@UWOVAX.UWO.CA

Date: 1 Nov 89 02:07:36 GMT
From: voa3!eab@uunet.uu.net (Al Brown)
Subject: Code Ode

I ran across this in an archived file. Maybe you'll enjoy it as much as I.

CODE ODE
by
Troy Weidenheimer, WOROF

It's more than dots and dashes,
It's a place.
A sanctuary for those who've learned
To love the mysterious magic of
Thoughts arriving in mile-long strings
On roads of ether or wire

Even more, it's peace,
A shield from the disordered sounds
Of traffic, angry people
And industrial clutter clatter,
Within its warm mantle
We find soothing respite.

And the patter of bright ideas it is,
The sharp focusing of others' thoughts
From miles beyond our vision's range.
As in a dream we sit so still.
It floats in ours ears and stirs our minds
With concern, remembrance, speculation
And mirth

And code is music,
From sounders and speakers it dances
In the shack to each sender's inner clock,
And comes butter smooth, deliciously swinging
Or choppy staccato from a "fist" praising definition,
Or perfectly metered, flowing exquisitely
From the gentle hand of an artist.

A place,

SWR. (Getting closer to the ground reduces the impedance, as does switching from a true "horizontal dipole" to an "inverted V" (ends drooping) configuration.) In any event, a dipole (or any other antenna) should always be tuned - in this case, cut to length - in the position in which it will be used. This avoids the problems you've run in to here ("Gee, I've cut it three times, and it's STILL too short!" :-)) Also note that height-above-ground also affects the radiation pattern, as the ground acts sort of like a reflector - horizontal antennas near the ground shoot more of their signal "up" rather than "out", with a resultant loss in "range" (or signal strength as measured horizontally out from the antenna).

What you might want to do is to mount your antenna, initially, using pulleys and ropes at all support points. Cut the antenna a bit long, then run it up into the final position and check it. Bring it down to cut it as needed, but keep putting it back into place to test it. When you've obtained your best match, you can permanently mount it in the same position as it was tested, and expect very similar readings.

Note also that in this particular design - several dipoles with a common feedpoint - each leg can affect ALL the others, depending on spacing, etc. Be sure to check the performance on ALL bands after trimming ANY of the dipoles. This can be a tricky antenna to tune. I've got one that works pretty well on 15 and 20 though, so keep at it - it IS "doable."

Bob Myers	KC0EW	HP Graphics Tech. Div.		Opinions expressed here are not
		Ft. Collins, Colorado		those of my employer or any other
myers%hpfccla@hplabs.hp.com				sentient life-form on this planet.

Date: 31 Oct 89 00:05:55 GMT
From: hpfcso!hpfcsl:perry@hplabs.hp.com (Perry Scott)
Subject: Field Day... OK... A proposal:

Rather than going blow-for-blow with John, I'm going to agree with most of what he says. At the same time, I disagree that the current points system reflects reality.

I worked some Health and Welfare traffic to SF after the quake. It made me realize that to be effective, I had to dump the "hobby" attitude and be more professional ("dedicated", as one of the local guys puts it.)

For example, it's true that you can run a QRP station longer than a KW station. On the other hand, if the majority of the country doesn't hear you, or you can't reliably communicate with most areas of the country, QRP is not useful. At the same time, it's pretty easy to siphon gasoline

out of the RVs and trucks, and not run out of gas. I found that passing traffic on 40 meters with the 80W PEP from my old TS520 just didn't quite cut the mustard. The same was true for the traffic handler in Alameda, CA. A kilowatt on both ends would have made everyone's life easier.

John is also right about being able to set up a field station. On the other hand, I was talking to a guy that had access to a telephone (i.e. at home), so both environments are useful. Local traffic was handled on 2 meters, and long-haul was on HF. So, why is there an extra multiplier to set up a field station ? Fresh air and sunshine ?

John is also right about not building your own equipment when all you really have to do is store spare radios somewhere. I suppose I could concede my radical stand on going to the mountaintop with a portable tribander. On the other, wire antennas will always be there because of the simplicity. Again, there is no multiplier for not using a rotatable beam that turns on 110v juice. Using a 1000' wire tossed down the slope gets my respect, but somehow a tribander does not. Maybe its because I don't have a beam at home.

Other miscellaneous amusing stuff from John's note:

>Hey, real disaster-relief agencies plan their simulations ahead of time!
It was clear from my SF experience that things are awfully confused in a real disaster. Even simple things like finding someone in the disaster area that has a radio and can control a frequency is a major undertaking.

>What, you should get an extra multiplier if you didn't enjoy yourself?
Heh, heh. Let's not get too "dedicated" here, ok ?

Perry

Date: 1 Nov 89 10:41:08 GMT
From: cs.utexas.edu!uwm.edu!ux1.cso.uiuc.edu!ux1.cso.uiuc.edu!phil@tut.cis.ohio-state.edu
Subject: I want my old callsign back !

> I was amazed and very disappointed when the FCC threw in the towel
> on the callsign project (PRB-3?). The ARRL may have been able to
> pull it off with a stronger position, but I could understand their
> reluctance to take it on. It's CLEARLY a government function to
> license amateur radio operators, and it torques me off that the
> option to buy a callsign doesn't exist. Can you imagine what
> DXers would be willing to pay for calls like W6DX, K6AA, etc?

Well, the ARRL could have still done it under the concept of callsign identification coordinator, who would have processed the requests for callsign SELECTION, and then forward the paperwork to the FCC (along with a significant portion of the fee to help George Bush bail out the federal deficit :-)) who would then enter into the computer (or read the computer tape or floppy disk) and file the paperwork.

> Does anyone suppose there's any prayer of resurrecting this
> planned program? I mean, with computer databases it's not all
> THAT difficult, and just think of the juicy call signs that are
> available--check out the Silent Keys list in QST every month!

I think there is hope. If the licensing fee happens, then that is good enough reason in my book to immediately try for it again, but that the FCC should do it with a fee that covers all the costs.

> I agree with the previous writer that the present policy is
> stupid--not only will we run out of Extra calls, but we'll run of
> N6ABC type calls first. Then people with Tech/Gen will be stuck
> with clunky 2x3s, and in the limit, ALL new calls will be 2x3s.
> And meanwhile there will be THOUSANDS of calls sitting in the
> database because the FCC is too understaffed to handle the task.

There is also hope that the FCC could re-use old calls, even if they are just chosen in sequence. All those retired (and SK for many years) W6ABC and K6ABC calls could be used. Also for Extra, there are many 1x2's no longer in use. That could be petitioned NOW if someone can be creative enough to justify it under the demise of PRB-3.

I also note that in the table of calls, AA1AAA and NA1AAA (the latter probably reserved for the ORIGINAL "Communicator" attempt) type calls are NOT included as part of assignables. While Novice calls seem to still have plenty of supply, Tech through Extra do seem very finite and it would be prudent to reuse them.

--Phil Howard, KA9WGN--
<phil@ux1.cso.uiuc.edu>

Date: 31 Oct 1989 19:50:56 GMT
From: fisher%minster.york.ac.uk@NSFnet-Relay.AC.UK
Subject: MODIFICATION for BC 100 for AM/FM on all freqs.

The Uniden Bearcat 100 XL is a beautifully made receiver which covers 66 - 512 MHz (with gaps). It can receive both AM and FM signals, but you cannot select which you want: the receiver selects AM on the air band (118 - 136 MHz)

and FM everywhere else. The following simple modification will allow you to select AM or FM independently of the frequency, by means of a 3-position switch. The three settings are: AM; FM; auto. (viz. AM on the air band, FM everywhere else).

Remove the battery cover. Unplug the ribbon cable at the bottom end of the receiver, and pull out the microprocessor (uP) board, which is also the front panel. Label the 12 wires of the ribbon cable 1 to 12, starting from the left, with the component side of the uP board towards you. Wire 2 is Vcc (about 7 V), wire 12 is ground, and wire 8 is the signal which goes from the uP to the receiver board to select AM or FM operation. It is 0 V (or open) for FM, and Vcc (approx.) for AM.

Unsolder wire 8 from the board, removing excess solder with a solder-sucker or wick. Obtain a single-pole change-over toggle switch with centre "off", and connect as follows.

```
from wire 8 on uP board      _____@
                             @---@_____ to wire 8 on Rx board
from wire 2 on uP board (Vcc) _____@          (AM/FM select)
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Use heat-shrink sleeving or plastic tape to insulate the connections.

The switch can be mounted on the battery cover, or perhaps -- if you can find a small enough switch -- on the top panel, next to the "lock" switch.

I've done it and it works.

Tony Fisher

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UUCP: fisher@minster.UUCP (...uunet!mcvax!reading!minster!fisher)

Date: 1 Nov 89 01:10:00 GMT

From: mirror!frog!john@CS.BU.EDU (John Woods)

Subject: New subject: Tesla vs gauss, and other obscure units

In article <851@ariel.unm.edu>, ee5391aa@hydra.unm.edu (Duke McMullan n5gax) writes:

> Consider this one: how many hams and other electronikers do you know who pro-
> nounce dB dee-bee, and how many of them actually know it means decibel?

Now hol' on thar! *I* pronounce it "dee bee", and I *know* that it means one-tenth of a bel. How one pronounces a unit often has more to do with convenience than with knowledge of the underlying unit (just TRY to tell me you've never referred to a "5 puff capacitor" :-).

>

> Habit, I suspect, coupled with the natural conservatism that we all possess.
> This will change. How many people do you know who know the peta- and exa-
> prefixes, and the femto- and atto- prefixes?

>

I do (despite a highly embarrassing article recently in which I interchanged peta and exa...:-). Two habits I do refuse to part with, however, are "mhos" and "cycles [per second]" (especially the former). "Mho"s are not only meaningful, but FUN as well.

Date: 31 Oct 89 22:05:06 GMT
From: ncrlnk!ncrwic!encad!entec!kthomps@uunet.uu.net (Ken Thompson)
Subject: Phone Patch Construction question

It may cost less as well to go dual-band.
Commercially made simplex patches can cost over \$500... more than that second radio.

--

Ken Thompson NOITL
NCR Corp. 3718 N. Rock Road
Wichita, Ks. 67226 (316)636-8783
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Date: 31 Oct 89 19:13:29 GMT
From: oliveb!mipos3!omepd!omews27.intel.com!raju@bbn.com (Rajendra Abhyankar)
Subject: Shortwave Radio

Hi,

I am need of a good shortwave radio. I am interested in in a receiver capable of recieving from 80 meters thru 10 meters. Any pointers as to availibility/cost/where can I get such a receiver, would be appreciated.

ThanksRajendra

Email: raju@mipon2.intel.com

Date: 31 Oct 89 18:13:48 GMT
From: zaphod.mps.ohio-state.edu!usc!csun!psivax!torkil@tut.cis.ohio-state.edu
(Torkil Hammer)
Subject: Tesla vs gauss, and other obscure units

In article <30339@buckaroo.mips.COM> vaso@mips.COM (Vaso Bovan) writes:
#The bel is of rather recent vintage, 1923 [A Dictionary of Scientific Units,
#4th Ed., Chapman & Hall, 1980]. This source contains the statement that "in
#continental Europe, the neper is used instead of the bel." Is this true,
#European readers ?

Nobody I knew of used neper. Isn't it supposed to pertain to RF levels?
Nobody used bells either. But everybody used decibels about sound levels.
And volume was something we measured in cubic meter.
Which leads to the next interesting question: Why is sound level or
sound level control called 'volume?'

Date: 1 Nov 89 16:15:43 GMT
From: gem.mps.ohio-state.edu!ctrsol!emory!stiatl!rsiatl!jgd@tut.cis.ohio-state.edu
(John G. De Armond)
Subject: Tesla vs gauss, and other obscure units

In article <2917@psivax.UUCP> torkil@psivax.UUCP (Torkil Hammer) writes:
>Nobody used bells either. But everybody used decibels about sound levels.
>And volume was something we measured in cubic meter.
>Which leads to the next interesting question: Why is sound level or
>sound level control called 'volume?'

That's easy. The control varies how many cubic feet of sound get produced
by the speakers. Didn't you know that the standard bell (of the church
variety) held about 1 cubic foot? Or that the home version was about
a tenth as spacious, ergo the decibel? Of course, if you have a hundred
or so of these decibels, the great pressure of the large volume
of sound, especially the higher density sounds, can cause damage such
as cracked plaster, damaged ear drums and so on.

Oh yeah, :-)

John

--

John De Armond, WD40QC	Manual? ... What manual !!?
Radiation Systems, Inc.	This is Unix, My son, You
Atlanta, GA	

emory!stiatl!rsiatl!jgd **I am the NRA** | just GOTTA Know!!!

End of INFO-HAMS Digest V89 Issue #833
